

REMARKS

Claims 7-18 are pending in this application, of which claims 7-9 and 16-18 have been amended. No new claims have been added.

Claims 16-18 stand rejected under 35 U.S.C. § 112, second paragraph, as indefinite.

The Examiner has specifically urged that a magnet having an “arcuate shape curving around the shaft cannot have a length radially disposed.”

Applicants respectfully submit that these claims cover the embodiment shown in FIG. 42. Claims 16-18 have been amended to delete the words “having a length radially disposed.”

Thus, the 35 U.S.C. § 112, second paragraph, rejection should be withdrawn.

The Examiner has maintained from the previous Office Action the 35 U.S.C. § 102(b) rejection of claims 7-9 as anticipated by Kapadia.

Applicants respectfully traverse this rejection.

As noted in Applicants’ response of March 25, 2005, FIG. 2 of Kapadia shows magnetic flux 54 leaking into shaft 16 from permanent magnets 41. This is in contrast to the present invention in which the magnetic field provided by the permanent magnet does not pass through the rotating shaft, as recited in claims 7-9 of the instant application.

The Examiner has asserted that the claims only recite the magnetic field produced by the permanent magnet does not pass through the rotating shaft, and that FIG. 2 of Kapadia clearly shows a magnetic field (54) does not pass through the shaft. The Examiner asserts that the claims do not require all the magnetic field not passing through the shaft.

Accordingly, claims 7 and 9 have been amended to recite that no portion of a magnetic field produced by the permanent magnet passes through the rotating shaft, and claim 8 has been amended to recite that a magnetic field produced by the permanent magnet entirely bypasses the rotating shaft.

Thus, the 35 U.S.C. § 102(b) rejection should be withdrawn.

Claims 10-12 and 16-18 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Naito et al. in view of Liu et al. (both previously applied).

Applicants respectfully traverse this rejection.

Naito et al. discloses a permanent magnet rotor having a series of slots 12A, 12B and 12C curving away from the center shaft. Permanent magnets are embedded in the slots 12A, 12B and 12C. The slots are all arcuate and curve away from the center rotating shaft.

This is in contrast to the present invention, in which the magnets either have a linear shape, as shown, for example, in FIGS. 40-41 and 43, or an arcuate shape curving around the center shaft, as shown in FIG. 42.

Claims 10-12 recite that the secondary permanent magnets each have a linear shape. Claims 16-18 recite secondary permanent magnets having an arcuate shape curving around the center rotating shaft.

Liu et al. discloses a permanent magnet rotor configuration which produces four magnetic poles utilizing two sets of symmetrically-disposed permanent magnets. The slots carrying the magnets exhibit a truncated V-shaped configuration, extending from points on the

periphery of the rotor to meet the ends of a straight, central portion which lies parallel to a tangent to the rotor shaft. A short magnetic bridge interrupts the center of each slot, the slots being disposed generally symmetrically upon opposite sides of the rotor shaft.

Liu et al., like Naito et al., discussed above, fails to teach, mention or suggest the linear or arcuate shape of the secondary permanent magnets.

Thus, the 35 U.S.C. § 103(a) rejection should be withdrawn.

Claims 13-15 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Kapadia in view of Narita et al. (previously applied).

Applicants respectfully traverse this rejection.

Narita et al. has been cited for teaching at least one slit 13a having a shape of an arc of a circle, but cannot be combined with Kapadia to teach the present invention because Kapadia discloses some magnetic flux leaking into the center rotating shaft.

Thus, the 35 U.S.C. § 103(a) rejection should be withdrawn.

In view of the aforementioned amendments and accompanying remarks, claims 7-18, as amended, are in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

U.S. Patent Application Serial No. 10/692,865
Response to Final Office Action dated June 15, 2005

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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